BRUHAT BANGALORE MAHANAGARA PALIKE

YELAHANKA ZONE

DIVISION: BYATARAYANAPURA

SUB DIVISION: VIDYARANYAPURA

Name of Work: ***Improvements to Roads and Drains to Lakkappa Layout and Hosabalunagara in Ward No. 11 (Kuvempunagara), Vidyaranyapura Sub Division.***

Job Code: 011-22-000003

Estimated Cost	***Rs. 100.00 Lakhs***
Sanctioned Cost:	***Rs. 91.84 Lakhs***
Modified Cost	***Rs.91.82 Lakhs***

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK:- Modified Estimate for Improvements to Roads and Drains at Lakkappa Layout and Hosabalu Nagara in Ward No.11, (Kuvempunagara).

								Estimation Cost. Rs.	**9182729.00**
Sl No	**Description of work**		**Mesurement**				**Qty**	**Rate**	**Amount**
		Unit	**No.**	**L**	**B**	**D**			
1	KSRRB 300-1. Earthwork excavation by manual means for roads, drains & similar works in ordinary soil excavated surface levelled and sides neatly dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specifications(P.No-143 &136 ,I No-19.1&17.4& 17.1) 5km lead= 57+2.0x1.28x5 =69.80								
	Drain Desilt	**Cum**							
	Lakappa Layout 5th Cross		2	203.00	0.45	0.45	82.22		
	Vardaraj Swamy Layout								
	1st Main Road								
	N/S	Cum	1	409.00	0.45	0.45	82.82		
	S/S	Cum	1	238.00	0.45	0.45	48.20		
	RCC Drain	Cum	1	253.00	1.10	0.90	250.47		
	Culverts								
	Vardaraj Swamy Layout								
	1st Main Road		5	6.00	1.80	1.20	64.80		
	Total						**528.50**	**217.00**	**114686.00**
2	**Removing and refixing** stone slabs of drains and pointing in CM (1:3) (P.No-27,I No-5.33).								
	BS slab of Drain								
	Open Drain (Sides & Bottom)	**Sqm**	Width=Perimeter of Drain in U Shape						
	Vardaraj Swamy Layout								
	1st Main Road								
	N/S	Cum	1	409.00	1.35		552.15		
	S/S	Cum	1	238.00	1.35		321.30		
						Total	**873.45**		
	Deduct 20% for Missing/Damaged						**174.69**		
	Consider 80% Qnty for Removing & Refixing						**698.76**		
	Total						**698.76**	**116.00**	**81057.00**
3	Providing granite slabs of selected quality roughly dressed having a size of 7.5cms thick and fixed in cement mortar (1:6) including fixing curing ete., complete.(P.No.27,I.No.5.31.1).								
	Provide 20% new BS Slab for Missing / Damaged	Sqm	From item no.2				**174.69**		
	Total						**174.69**	**779.00**	**136084.00**

Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty	Rate	Amount
4	KSRB 4-1.3 : Providing and laying in position plain cement concrete of mix 1:4:8 with OPC cement @ 180kgs, with 40mm and down size graded granite metal coarse aggregates @0.85cum and fine aggregates @ 0.57cum machine mixed, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.13, I.No. 4.3).								
	For Drain								
		Cum	1	253.00	1.10	0.15	41.75		
	Flagging Course								
	Vardaraj Swamy Layout								
	1st Main Road								
	N/S	Cum	1	409.00	0.30	0.15	18.41		
	S/S	Cum	1	238.00	0.30	0.15	10.71		
	Vardaraj Swamy Layout								
	1st Main Road		5	6.00	1.70	0.15	7.65		
	Total						**78.51**	**6093.00**	**478362.00**
5	Providing laying plain/ reinforced cement concrete for side Drains Using M20 nominal mix Concrete with OPC at 300kgs.With 20mm and Down size granite metal coarse aggregate at 0.69cum and fine aggregate at 0.43cum Machne mixed, well compacted for wall and Bottom including centering shuttering,cost of materials,HOM of Machinery,Curing Etc.,Complete Excluding cost of Steel as per morth MORTH specification No. 1500, 1700, 2200. Including Cost of material, Labour, HOM complete as per Specification-WALL & Bottom thickness 15Cm(Item No 37.59.2 page no 271).								
	Drain								
	Bottom Raft	**Cum**							
	Vardaraj Swamy Layout								
	1st Main Road S/S	Cum	1	253.00	0.90	0.15	34.16		
	Side Wall								
	Vardaraj Swamy Layout								
	1st Main Road S/S	Cum	2	253.00	0.15	0.60	45.54		
						Sub Total	**79.70**		
	Total						**79.70**	**8116.00**	**646805.00**
6	KSRB M2200-6 Providing T.M.T bars Fe 500 steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. MORTH Specification No.1600 & 2200 Specification No. Pg No.229 / Item No.28.8.2.								
	For Drain	Cum	From Item No.05				79.70		
		kg	Steel assumed 60Kg/Cum of				4781.70		
		tonne					**4.78**		
	Total						**4.78**	**95125.00**	**454860.00**
7	Providing and Fixing pre cast covering Slab made out of CC 1:2:4 with 10 cm thick and Finishing cutting, including form work, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc., copmplete. (Data Rate).								
	New Drain Cover slab								

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
	Vardaraj Swamy Layout								
	1st Main Road S/S	Sqm	2	409.00	0.90		736.20		
	Total Qty						**736.20**		
	Qty upto125%						**456.75**	**2018.00**	**921722.00**
	Qty Above 125%						**279.45**	**2453.15**	**685533.00**
	Approved Rate	**2337.00**							
	Tender Premium @ +4.97%	**116.15**							
	Grand Total	**2453.15**							
8	KSRRB 300-50. Scarifying bituminous course 50mm to 75mm thick along with premix carpet / surface dressing by road roller attached with scarifier without disturbing the base and stacking the debris including cost of all labour charges, HOM of machineries complete as per specifications. MORTH / Chapter 3(P.No.146, I.No.19.56)								
	Vardaraj Swamy Layout								
	1st Main Road	Sqm	1	325.00	6.00		1950.00		
	Total						**1950.00**	**43.40**	**84630.00**
9	KSRRB 300-58. **Compaction of original ground** by mechanical means including filling in depression occuring during rolling including cost of all labour, HOM complete as per specifications.(I No-19.64,P No-147)								
	Vardaraj Swamy Layout								
	1st Main Road	Sqm	1	325.00	6.00		1950.00		
	Total						**1950.00**	**6.60**	**12870.00**
10	KSRRB M400-17. Providing, laying, spreading and compacting cushed stone aggregates of granite / trap / basalt to **wet mix macadam** specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications(P.No-155,I No-20.18)								
	Vardaraj Swamy Layout								
	1st Main Road	Cum	1	325.00	6.00	0.25	487.50		
	Lakappa Layout 5th Cross		1	203.00	6.00	0.25	304.50		
	Consider 30% of Total Qty Lakkappa Layout						91.35		
	Total						**578.85**	**2101.00**	**1216164.00**
11	KSRRB M500-6. Providing and applying **primer coat** with S.S. bitumen emulsion on prepared surface of granular base such as WMM including cleaning of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per specifications Clause 502 of MORTH V revision(P.No-158,I No-21.6)								
	Vardaraj Swamy Layout								
	1st Main Road	Sqm	1	470.00	6.00		2820.00		
	Lakappa Layout 5th Cross		1	203.00	6.00		1218.00		

Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty	Rate	Amount
	Consider 30% of Total Qty Lakkappa Layout						365.40		
	Total						**3185.40**	**35.60**	**113401.00**
12	KSRRB 500-11. Providing and laying bituminous macadam on prepared surface with crushed coarse aggregates as per design mix formula for base / binding course including loading of aggregates with F.E. loader, hot mixing of stone aggregates and bitumen in hot mix plant, transporting the mixed material in tipper to paver and laying mixed materials with paver finisher to the required level and grade, rolling by smooth wheeled, vibratory & tandem rollers to achieve the desired density, but excluding cost of primer / tack coat including lead, lift and cost of all materials, labour, HOM of machineries complete as per specifications. MORTH /Chapter 5 - using 40/60 TPH capacity H.M.P. with Mechanical paver Gr-II (50 mm to 75 mm) with 3.4 % VG-30 Bitumen (P.No.159, I.No. 21.11.6).								
	New Road								
	Vardaraj Swamy Layout								
	1st Main Road	Cum	1	470.00	6.00	0.05	141.00		
			1	203.00	6.00	0.05	60.90		
	Consider 30% of Total Qty Lakkappa Layout						18.27		
	Total						**159.27**	**7105.00**	**1131614.00**
13	KSRRB 500-7. Providing and **applying tack coat** using 80/100 grade bitumen(VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM complete as per specifications (P.No-161,I No-21.7)								
	Vardaraj Swamy Layout								
	1st Main Road	Sqm	1	470.00	6.00		2820.00		
	Lakappa Layout 5th Cross		1	203.00	6.00		1218.00		
	Total						**4038.00**	**13.30**	**53706.00**
14	KSRRB M500-19. Providing and laying **bituminous concrete** using crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications Clause 507 of MORTH V revision using40/60 TPH capacity H.M.P. with Mechanical Paver Gr-ll (30 mm to 45 mm) with 5.4% VG-30 Bitumen(P.No-162,I No-21.22.6)								
	Vardaraj Swamy Layout								
	1st Main Road	Cum	1	470.00	6.00	0.04	112.80		
	Lakappa Layout 5th Cross		1	203.00	6.00	0.04	48.72		
	Total						**161.52**	**10501.00**	**1696122.00**
15	KSRRB M800-13.**Road Marking with Hot Applied Thermoplastic Compound** with Reflectrising Glass Beads on Bituminous Surface/ Concrete Surface: Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 standards specified. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803(P.No-182,I No-24.15)								
	Vardaraj Swamy Layout								
	1st Main Road	Sqm	2	470.00	0.10		94.00		

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
	Total						**94.00**	**477.00**	**44838.00**
	EIRL								
E1	KSRB 5-14 : Providing and constructing load bearing wall with solid concrete blocks of size 400x150x200 mm having block density not lessthan 1800 kg/m3 and having a minimum average compressive strength 4.00 N/mm2 confirming to IS 2185 (Part) : 2005 and constructed with CM 1:4 , as per IS 2572:2005 including cost of all materials, labour charegs, scaffolding, curing complete as per specifications. KBS No.5.4 Page No. 27 / Item No. 5.26.2, PWD SR 2018-19								
	Vardaraj Swamy Layout								
	1st Main Road								
	N/S	Cum	2	409.00		0.40	327.20		
	S/S	Cum	2	238.00		0.60	285.60		
	Total						**612.80**	**1028.12**	**630031.00**
	Basic rate	924.00							
	Area weightage 6%	55.44							
	Sub Total	**979.44**							
	Tender Premium @ +4.97%	**48.68**							
	Grand Total	**1028.12**							
E2	Providing and laying in position plain cement concrete of mix 1:2:4 with cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.69 cum and fine aggregtes @ 0.459cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, for coping. Including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. Page. No. 255 / Item No. 34.11 of PWD SR 2018-19.								
	Vent Concrete								
	Vardaraj Swamy Layout								
	1st Main Road								
	N/S	Cum	1	409.00	0.45	0.10	18.41		
	S/S	Cum	1	238.00	0.45	0.10	10.71		
	Coping Concrete								
	Vardaraj Swamy Layout								
	1st Main Road								
	N/S	Cum	2	409.00	0.15	0.12	14.72		
	S/S	Cum	2	238.00	0.15	0.12	8.57		
	Culverts								
	Vardaraj Swamy Layout								
	1st Main Road								
	Coping, Vent Concrete	Cum	5	6.00	1.50	0.15	6.75		
	Ramp								
			5x2	6.00	1.00	0.15	9.00		
	Total						**68.16**	**5878.30**	**400648.00**
	Basic rate	5283.00							
	Area weightage 6%	316.98							
	Sub Total	**5599.98**							
	Tender Premium @ +4.97%	**278.32**							
	Grand Total	**5878.30**							

Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty	Rate	Amount
E3	Providing and constructing granite / trap / basalt size stone masonry in basement with cement mortar 1:6, edges of stones chistle dressed in courses not less than 15 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications. Page No. 255, Item No. 34.9, PWD SR 2018-19								
	Culverts								
	Vardaraj Swamy Layout								
	1st Main Road								
		Cum	5x2	6.00	0.60	0.45	16.20		
		Cum	5x2	6.00	0.45	0.45	12.15		
	Total						**28.35**	**6100.84**	**172959.00**
	Basic rate	5483.00							
	Area weightage 6%	328.98							
	Sub Total	**5811.98**							
	Tender Premium @ +4.97%	**288.86**							
	Grand Total	**6100.84**							
E4	Providing precast slab of 250mm thick including cost of all materials, labour, curing, transportation, loading unloading, etc.,complete as per the direction of engineer in charge - (Data rate Approved). As per PWD SR 2018-19								
	Culverts								
	Vardaraj Swamy Layout								
	1st Main Road								
		Sqm	5x10	1.50		0.25	18.75		
							18.75	**5687.27**	**106637.00**
	Approved Rate	**5418.00**							
	Tender Premium @ +4.97%	**269.27**							
	Grand Total	**5687.27**							
								Grand Total	**9182729.00**
Rupees Ninety One Lakh(s) Eighty Two Thousand Seven Hundred Twenty Nine Only									

Technical Sanction
Accorded For Rs 9182780-0
Head of A/C P.3873
CER NO : 87 Dt: 21.04.2022

CERTIFICATE:

1) The work spot has been inspected and found to be necessary.
2) The work spot comes under B.B.M.P.
3) The provisions made in the estimate are necessary and minimum.
4) The estimate is based on C.S.R of 2018-2019,Issue rates and Data Rates +/- Tender Premium.

Assistant Engineer
BBMP

Assistant Executive Engineer
BBMP
Vidyaranyapura Sub Division
BBMP Bangalore - 97

Executive Engineer
BBMP
21/04

152 - BYATARAYANAPURA AC
WARD NAME : 11 - KUVEMPU NAGAR